

TRANSLATION

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P36737P0-540	FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. PCT/JP2004/018927	International filing date (<i>day/month/year</i>) 17.12.2004	Priority date (<i>day/month/year</i>) 18.12.2003	
International Patent Classification (IPC) or national classification and IPC H01L27/14, H01L31/02, H04N5/335			
Applicant MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.			

<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>6</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> (<i>sent to the applicant and to the International Bureau</i>) a total of <u>7</u> sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

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Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:

 - international search (Rule 12.3 and 23.1(b))
 - publication of the international application (Rule 12.4)
 - international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the **elements** of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

the international application as originally filed/furnished
 the description:
 pages 1-38 _____ as originally filed/furnished
 pages* _____ received by this Authority on _____
 pages* _____ received by this Authority on _____
 the claims:
 nos. 9, 10, 12 _____ as originally filed/furnished
 nos.* _____ as amended (together with any statement) under Article 19
 nos.* 8, 11, 15, 17-19, 33 _____ received by this Authority on 18.10.2005
 nos.* _____ received by this Authority on _____
 the drawings:
 sheets Fig. 1-32 _____ as originally filed/furnished
 sheets* _____ received by this Authority on _____
 sheets* _____ received by this Authority on _____
 a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. The amendments have resulted in the cancellation of:

the description, pages _____
 the claims, nos. 1-7, 13, 14, 16, 20-32
 the drawings, sheets/figs _____
 the sequence listing (*specify*): _____
 any table(s) related to sequence listing (*specify*): _____
4. This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

the description, pages _____
 the claims, nos. _____
 the drawings, sheets/figs _____
 the sequence listing (*specify*): _____
 any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	<u>8-12, 15, 17-19, 33</u>	YES
	Claims	_____	NO
Inventive step (IS)	Claims	<u>12, 19</u>	YES
	Claims	<u>8-11, 15, 17, 18, 33</u>	NO
Industrial applicability (IA)	Claims	<u>8-12, 15, 17-19, 33</u>	YES
	Claims	_____	NO

2. Citations and explanations (Rule 70.7)

Document 1: JP 2003-116066 A (Sony Corporation), 18 April 2003, entire text; fig. 1 and 5 & US 2003/80434 A1

Document 2: JP 2002-329850 A (Canon Inc.), 15 November 2002, entire text; fig. 1 and fig. 4 to 13

Document 3: JP 2000-286401 A (Miyota KK), 13 October 2000, entire text; fig. 3 to 6

Document 4: JP 9-69618 A (Sony Corporation), 11 March 1997, paragraphs [0015] and [0016]; fig. 1

Document 5: JP 2003-303947 A (Sony Corporation), 24 October 2003, paragraph [0005], [0020]; fig. 6 and fig. 12

Document 6: JP 11-74496 A (Sharp Corporation), 16 March 1999, paragraphs [0008] to [0016]; fig. 7 to 11

Document 7: JP 5-326904 A (Japan Synthetic Rubber Co., Ltd.), 10 December 1993, paragraphs [0001], [0002], [0035] and [0039]

Document 8: JP 2003-347529 A (Fuji Photo Film Co., Ltd.), 5 December 2003, paragraphs [0020] to [0048]; fig. 1 to 3 & US 2004/77121 A1

The invention set forth in claims 8 and 9 does not

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involve an inventive step in the light of document 1, documents 2, 3 or 6, and documents 4 and 5.

Documents 2, 3 and 6 set forth a feature wherein a transparent protective plate has a skirt part around its outer peripheral edge.

A solid-state imaging device which is cut into individual devices after a transparent protective plate has been fitted is set forth in document 1 (paragraphs [0020] to [0020], etc.) and document 2 (paragraphs [0014], etc.).

Document 2 (paragraph [0018]) indicates that plated bumps are used as the metal protrusions 223.

The invention set forth in claim 10 does not involve an inventive step in the light of documents 1, 2, 4 and document 5, and documents 6 and 7.

Documents 2, 3 and 6 set forth a feature wherein a transparent protective plate has a skirt part around its outer peripheral edge.

A solid-state imaging device which is cut into individual devices after a transparent protective plate has been fitted is set forth in document 1 (paragraphs [0020] to [0020], etc.) and document 2 (paragraphs [0014], etc.).

Document 6 sets forth a cap comprising transparent resin formed in a bathtub-shape, and document 7 indicates that a CCD lid is formed using press-molding.

The inventions set forth in claims 11 and 33 do not involve an inventive step in the light of documents 1, 2, 4 and 5.

With regard to the feature wherein a light-receiving chip has a rib part, and the feature wherein the rib part is prepared in the process of generating a semiconductor,

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take note that document 2 (paragraph [0018]) indicates that the metal protrusions (223) may also be provided on the IC electrode 1c.

A solid-state imaging device which is cut into individual devices after a transparent protective plate has been fitted is set forth in document 1 (paragraphs [0020] to [0022], etc.) and document 2 (paragraph [0014], etc.).

The inventions set forth in claims 15, 17 and 18 do not involve an inventive step in the light of documents 1, 2, 4 and 5, and document 8.

Document 8 sets forth an invention wherein conductive paste is used in through holes 208 formed in a glass substrate 201 to form a conductive layer, and a bonding pad 210 is formed on the upper surface of said glass substrate. Document 8 also sets forth a feature wherein the solid-state capture element substrate 100 comprises a silicon substrate 101, and a bonding pad BP is formed on the silicon substrate 101.

A solid-state imaging device which is cut into individual devices after a transparent protective plate has been fitted is set forth in document 1 (paragraphs [0020] to [0022], etc.) and document 2 (paragraph [0014], etc.).

The feature of the invention set forth in claim 12, wherein "the aforementioned light-receiving chip has a rib part formed of an insulating substance of the same material as the protective film on the aforementioned outer peripheral region", and the feature of the invention set forth in claim 19, wherein "the aforementioned conductive member comprises a conductive

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film deposited on the surface extending from one principal surface via the side surface to the other principal surface of the aforementioned transparent protective plate", are not disclosed in any of the documents cited in the international search report, and the inventions set forth in claims 12 and 19 would not be obvious to a person skilled in the art. (However, with regard to the invention set forth in claim 19, the term "conductive member" does not appear before the wording "the aforementioned conductive member", therefore "the aforementioned conductive member" is unclear, and the connections between the electrodes and the terminal pad are unclear.